

SECTION 24

FLOOR AND WALL HOLES AND OPENINGS

24.A GENERAL

24.A.01 All floor and roof openings into which persons can accidentally walk or fall through shall be guarded by a physical barrier or covered.

24.A.02 All floor and roof holes through which equipment, materials, or debris can fall shall be covered.

24.A.03 Coverings for floor and roof openings shall be of sufficient strength to support any load which may be imposed and shall be secured in place to prevent accidental removal or displacement.

24.A.04 Conduits, trenches, and manhole covers and their supports, when exposed to vehicles or equipment, shall be designed to carry a truck rear axle load of 2 times the maximum anticipated load.

24.A.05 Wall openings, from which there is a drop of more than 1.2 m (4 ft) and the bottom of the opening is less than .9 m (3 ft) above the working surface, shall be guarded with a top rail or a top rail and intermediate rail or a standard guardrail. A toeboard or enclosing screen shall be provided where the bottom of the wall opening, regardless of width, is less than 10 cm (4 in) above the working surface.

24.A.06 Wall opening protection shall meet one of the following requirements:

a. barriers of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a

load of at least 90 kg (200 lb) applied in any direction (except upward) with a minimum of deflection at any point on the top rail or corresponding member, or

b. screens of such construction and mounting that they are capable of withstanding a load of at least 90 kg (200 lb) applied horizontally at any point on the near side of the screen: they may be of solid construction, or grill work with openings not more than 20 cm (8 in) long, or of slat work with openings not more than 10 cm (4 in) wide with length unrestricted.

24.A.07 Every hatchway and chute floor opening shall be guarded by a hinged floor-opening cover. The opening shall be barricaded with railings so as to leave only one exposed side; the exposed side shall be provided either with a swinging gate or so offset that a person cannot walk into the opening.

24.A.08 An extension platform outside a wall opening onto which materials can be hoisted for handling shall have a standard railing that meets Section 21.B of this manual. However, one side of an extension platform may have removable railings to facilitate handling materials.

DEFINITIONS

Floor (roof) hole: a ground, floor, or roof opening measuring less than 30 cm (12 in) but more than 2.5 cm (1 in) in its least dimension.

Floor (roof) opening: a ground, floor, or roof opening measuring 30 cm (12 in) or more in its least dimension; includes skylights.

Wall hole: a wall opening less than 75 cm (30 in) but more than 2.5 cm (1 in) in height and of unrestricted width.

Wall opening: a wall opening at least 75 cm (30 in) high and 45 cm (18 in) wide.

SECTION 25

EXCAVATIONS

25.A GENERAL

25.A.01 Planning.

a. Prior to opening an excavation, underground installations (e.g., sewer, telephone, water, fuel, electric lines) shall be located and protected from damage or displacement: utility companies and other responsible authorities shall be contacted to locate and mark the locations and, if they so desire, direct or assist with protecting the underground installations.

b. Where excavations are to be performed in areas known or suspected to be contaminated with explosives, unexploded munitions, or military ordnance, surface and subsurface clearance by qualified explosive ordnance disposal (EOD) personnel shall be accomplished prior to excavation work.

25.A.02 Excavation inspection and testing.

a. When persons will be in or around an excavation, the excavation, the adjacent areas, and protective systems shall be inspected daily, as needed throughout the work shifts, and after every rainstorm or other hazard-increasing occurrence by a competent person.

b. If evidence of a situation which could result in possible cave-ins, slides, failure of protective systems, hazardous atmospheres, or other hazardous condition is identified, exposed workers shall be removed from the hazard and all work in the excavation stopped until all necessary safety precautions have been implemented.

c. In locations where oxygen deficiency or gaseous